The economic development impact of rose value chains in North Vietnam

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Aims of presentation

Provide insight in:

- Methodology for quantifying the impact of value chains on economic development and poverty reduction
- Flower sector development in Vietnam
- Impact of rose value chains on poverty
- Policy implications

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Research questions

The main research questions of our study are:

- How important are different activities within a horticultural value chain to sustain livelihoods?
- How much value is generated by different types of chains?
- How many people depend upon a certain horticulture value chain?
- How many persons stay out of poverty because they participate in a certain horticulture value chain?
- Which type of chain for a certain commodity is more ProPoor?
- Which commodity is most ProPoor?

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Horticulture commodity selection

- Criteria for selection of horticulture commodity:
  - Large number of different value chains
    - Small farmers, cooperatives, companies, supermarkets, exporters
  - Production close to urban areas as well as remote poor rural areas
  - A commodity which has not yet been studied (research gap)
  - A commodity in which poor are expected to participate
- Based on these criteria the following commodities were short listed:
  - Banana, Litchi, Tomato, Cucumber, Chili pepper, Roses
- Final choice → roses:
  - No research on flower value chains in Vietnam
  - Supply to Hanoi from peri-urban areas and remote rural areas
  - Produced both by small farmers, coops and large rose companies
- Due to limited research budget → only focus on Hanoi and North Vietnam

Qualitative methodology

Qualitative:
- Rose sector analysis
- Description of value chain and actors
- Farming system assessment
- Past and future developments
- Poverty assessment (before and after)

Tools:
- Interviews with key informants
- Focus group meetings in each location
  - District leaders (9), Commune leaders (13), Rose producers (15) Traders (10), Workers (6)
- Use of participatory assessment tools such as:
  - Time lines
  - Wealth ranking
  - Pair wise ranking
  - Mapping
  - Problem trees

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Quantitative methodology

- Surveys among all chain actors:
  - 65 producers
  - 1 large company and 6 workers
  - 15 wholesalers
  - 66 retailers
  - 15 workers in flower shops
- Collect data to:
  - Calculate profitability and employment
  - calculate a "with and without" situation
  - calculate market shares of different channels

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Most important flowers in Vietnam

No individual area data are available for different flowers → but most important are:

- roses, approx. 35% of flower area
- chrysanthemum, approx. 25-30% of flower area
- gladiolus and others, approx. 20-25% of flower area
- carnation
- orchids
- lily

Flower & Ornamental area Vietnam

Region	2001 (in ha)	2002 (in ha)	2003 (in ha)
North	***5,465***	***6,061***	***7,804***
Red River Delta	5,196	5,721	7,119
North East	107	168	506
North West	32	33	10
North Central Coast	130	139	174
South	***3,047***	***3,369***	***4,245***
South Central Coast	558	564	431
Central Highlands *(Of which Dalat)*	1,345 (1,254)	1,583 (1,467)	1,801 (1,728)
South East	1,016	1,013	1,581
Mekong River Delta	128	209	432
Vietnam	**8,512**	**9,430**	**12,054**

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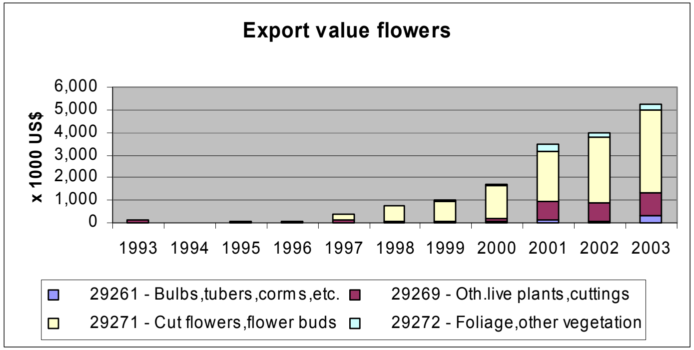
Import and Export of flowers & ornamentals



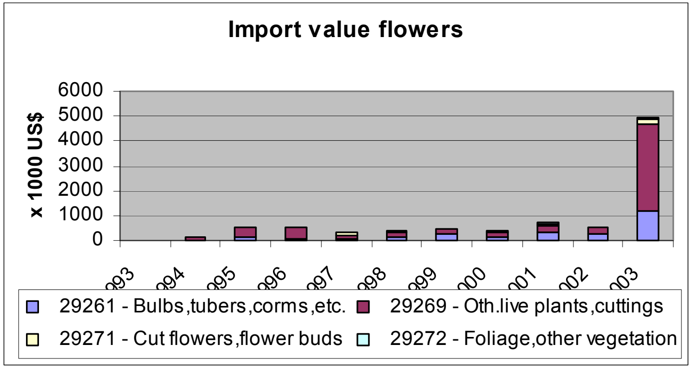
Source: Compiled from ITC/WTO PCTAS, 2004

Exports

- Total worldwide exports in 2003 US$ 11.4 billion
- VN 2003: → US$ 5 million
- VN: Annual growth of 38% per year
- Japan, Australia and Netherlands most important destination

Imports

- Taiwan, Netherlands, Thailand and China



Source: Compiled from ITC/WTO PCTAS, 2004

Types of rose value chains

Farmers → Wholesaler → Retailer → Consumer

Farmers → Retailer → Consumer

Farmers → Consumer

Farmers → Assemblers → Wholesalers other provinces → Retailer

Flower company → Wholesaler → Retailer → Consumer

Flower company → Retailer → Consumer

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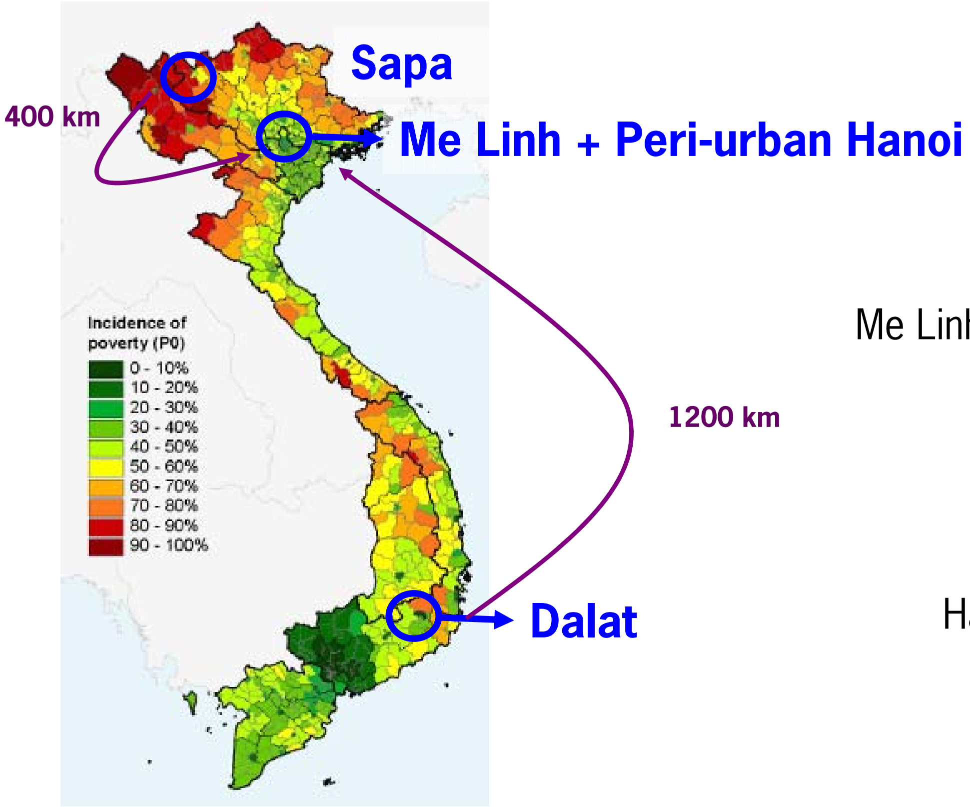
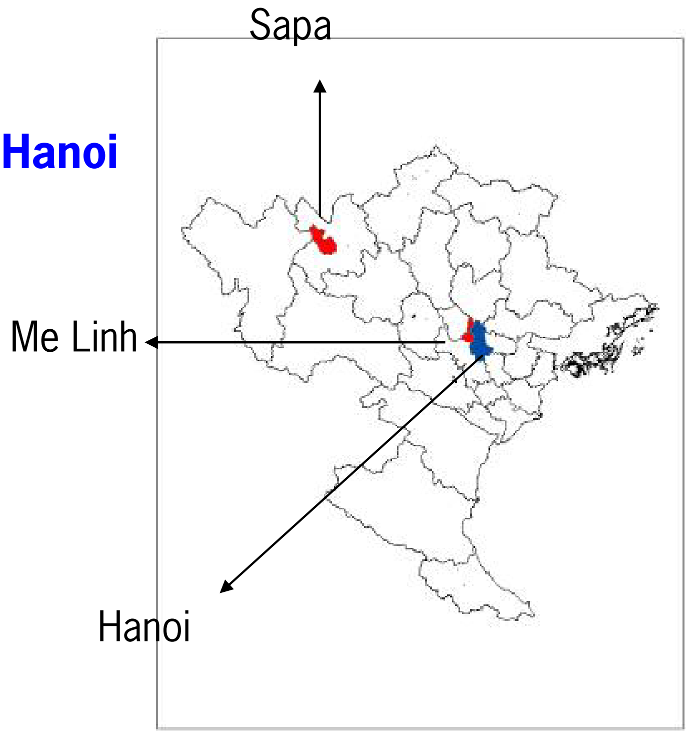
Where do the roses come from?





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Qualitative: Me Linh Rose timeline

1990-1992	1993	1994-1996	1997	1999-2000	2002-2004
Mr Loi first to cultivate Dalat rose variety	40 rose collectors active	Farmer innovation: Wild local rose grafted with French, Dutch, Italian varieties	More new varieties of roses	First wholesalers appear	Diversification Lilly, Forget-me-not etc.
	20 households cultivate roses	350 households cultivate roses	New flowers Chrysanthemum	Official flower market opened	1850 households
			First cold storage built Many farmers get loan from BARD	Me Linh farmers start looking for high altitude locations	43 cold storage units
	2 ha	120 ha	171 ha	272 ha	371 ha

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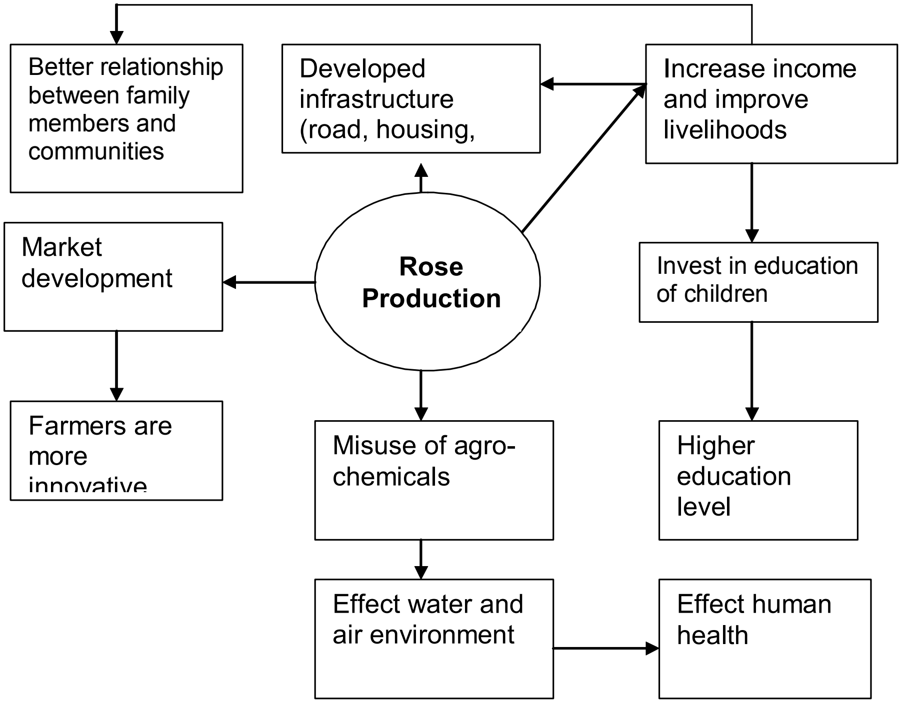
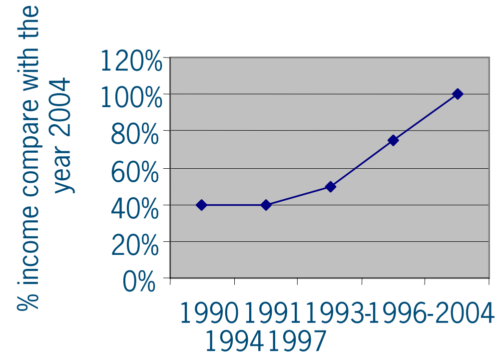
Effects of rose sector development





Qualitative: Rose History Sapa

1991-1992	1997-1998	2000	2001-2002	2003	2004
Experiment with 200 m^2 of roses	Me Linh roses cultivated in Sapa by one Me Linh farmer	More farmers from Me Linh rent land in Sapa	Company started large scale rose farm	2 new companies start flower farm	24 households grow roses
French "experts" planted them		Dalat and French roses cultivated	Local farmers start growing roses and hire labour from Me Linh	Establishment of 4 rose cooperatives	All Kinh ethnicity Some H'mong farmers also want to learn, but lack capital
			Dutch roses		
200 m^2	1.5 ha	5 ha	25 ha	40 ha	55 ha roses 6 ha other flowers

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Impact of roses for hired labourers

Alternative for illegal timber trade

Employment on rose farms

Cash income

Invest in education of children

Invest in fruit trees

Obtain experience with rose production. Future: own rose farm

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Investigated rose value chains

Location	Channel	Actors				
Me Linh, Vinh Phuc	1A	Farmers	Wholesalers		Flower shops	Consumers
	1B				Flower stalls	
	1C				Mobile hawkers	
	1D				Supermarkets	
	2A	Farmers			Flower shops	Consumers
	2B				Flower stalls	
	2C				Mobile hawkers	
	3	Farmers				Consumers
Sapa, Lao Cai	4A	Large farms (> 2 ha)	Wholesalers		Flower shops	Consumers
	4B				Flower stalls	
	4C				Mobile hawkers	
	4D				Supermarkets	
	5A	Small farms (< 1 ha)	Wholesalers		Flower shops	Consumers
	5B				Flower stalls	
	5C				Mobile hawkers	
	5D				Supermarkets	
	6	Workers	Large flower company	Wholesalers	Flower shops	Consumers

Profitability of roses

Indicator	Me Linh	Sapa	
	Farmers (n=45)	Farmers (N=6)	Company (n=1)
Productivity (1000 roses/ha)	900 (small)	230 (large)	170 (large)
Gross value (US$/ha)	16,077	17,982	10,038 – 16,477
Fixed cost (US$/ha)	1,095	1,511	397
Variable cost (US$/ha)	6,190	10,142	5,626
Gross Margin (US$/ha)	9,888	7,839	4,412 – 10,851
Cost price US$/rose	0.01	0.05	0.03

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Labour required to supply 10,000 roses

	Me Linh (FTE/10,000 roses)							**Sapa** (FTE/10,000 roses)						
Chain →	*1A*	*1B*	*1C*	*2A*	*2B*	*2C*	*3*	*4A*	*4B*	*4C*	*5A*	*5B*	*5C*	6
Worker														0.49
Producer	0.32	0.32	0.32	0.43	0.43	0.43	0.51	0.32	0.32	0.32	0.88	0.88	0.88	0.02
Wholesaler	0.01	0.01	0.01					0.02	0.02	0.02	0.02	0.02	0.02	0.02
Flower shop	0.880			0.23				0.88			0.88			0.88
Flower stall		0.24			0.14				0.24			0.24		
Hawker			0.14			0.14				0.14			0.14	
Total	**1.21**	**0.57**	**0.47**	**0.65**	**0.57**	**0.56**	**0.51**	**1.22**	**0.58**	**0.48**	**1.78**	**1.14**	**1.04**	**1.41**

- **1 Full Time Employed (FTE) person = 240 labour days per year**
- **Chain 5a needs most FTE per 10,000 roses**

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Net value per 10,000 roses per channel per actor

	Me Linh (net value in USD/10,000 roses)							**Sapa** (net value in USD/10,000 roses)						
Chain	*1A*	*1B*	*1C*	*2A*	*2B*	*2C*	*3*	*4A*	*4B*	*4C*	*5A*	*5B*	*5C*	6
Worker														252
Producer	97	97	97	150	150	150	62	158	158	158	337	337	337	236
Wholesaler	41	41	41					57	57	57	57	57	57	57
Flower shop	406			185				406			406			406
Flower stall		96			199				96			96		
Hawker			133			106				133			133	
Total	544	234	271	334	349	256	62	622	312	348	801	490	527	951

- Per 10,000 roses the workers in a company have higher net value than farmers
- Me Linh farmers who sell directly to flower shops get US$ 53 more per 10,000 roses
- Farmers who sell directly to consumers get US$ 35 less than through wholesalers
- Flower stall owners who buy directly from farmers get US$ 103 more than buying from wholesalers

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Net value in US$ per FTE

	Me Linh							Sapa						
Chain	*1A*	*1B*	*1C*	*2A*	*2B*	*2C*	*3*	*4A*	*4B*	*4C*	*5A*	*5B*	*5C*	6
Worker														516
Producer	437	437	437	358	358	358	192	647	647	647	548	548	548	482
Wholesaler	3,832	3,832	3,832					4,176	4,176	4,176	4,176	4,176	4,176	4,176
Flower shop	977			815				977			977			977
Flower stall		827			1,856				827			827		
Hawker			1,244			941				1,244			1,244	
Total	5,246	5,096	5,513	1,173	2,214	1,299	192	5,799	5,650	6,067	5,701	5,551	5,968	6,151

- Wholesalers have the highest net value per FTE because of their large volumes
- Net value for Sapa roses for farmers and wholesalers per FTE much higher
- The net value that can be generated per FTE is highest in channel 6

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Prices through the chains

	Me Linh (mean price in VND/rose)							Sapa (mean price in VND/rose)						
Chain	*1A*	*1B*	*1C*	*2A*	*2B*	*2C*	*3*	*4A*	*4B*	*4C*	*5A*	*5B*	*5C*	6
Producer	276	276	276	676	318	313	253	1,227	1,227	1,227	1,130	1,130	1,130	914
Wholesaler	340	340	340					1,330	1,330	1,330	1,232	1,232	1,232	1,017
Flower shop	1,628			1,340				2,617			2,520			2,304
Flower stall		622			704				1,611			1,514		
Hawker			621			527				1,611			1,514	
Consumer	1,628	622	621	1,340	704	527	253	2,617	1,611	1,611	2,520	1,514	1,514	2,304

- On average farmers in Sapa receive highest price
- In Me Linh, farmers who sold directly to retailer obtained the highest price
- But price is just one aspect, volume should also be accounted (see NetValue/FTE)

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Estimate of economic impact of investigated chains

	Our sampled chains	Overall
Roses consumed in Hanoi (stems/year)	88 million	261 million
Employment in FTE (240 days/year)	6,000	17,000
Gross value (US$/year)	10.5 million	27.8 million
Net value (US$/year)	2.8 million	7.5 million

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Rose dependence

Actor	Average share of family income generated by rose production/trade (%)	Average income from roses (US$/year)
Producers in Chains 1, 2, and 3	79	1,611
Producers in Chain 4	75	8,201
Producers in Chain 5	61	4,947
Workers at Company	-	580
Wholesalers	42	5,111
Flower shops	23	2,020
Workers in flower shops	-	843
Flower stalls	29	1,385
Hawkers	33	1,003

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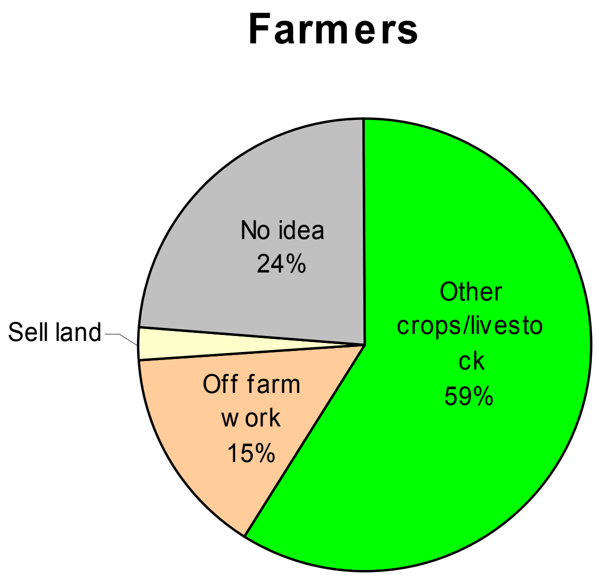
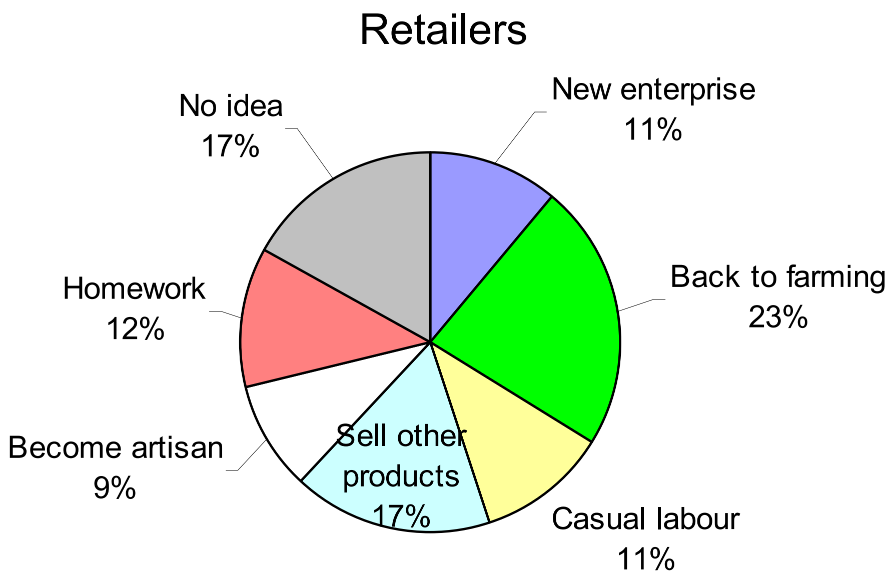
Alternatives outside rose value chains

- Discussions with farmers and traders discussed “what would be the best alternative if not in flower value chain”?





With-Without poverty impact for producers

	Poverty Measurement	*Me Linh 1, 2, 3 n=47*	*Sapa 4 n=3*	*Sapa 5 n=3*
Current Status	1 PPP$/day	11	0	0
	Expenditure Approach	15	0	0
	2 PPP$/day	15	0	0
Vegetable focus	1 PPP$/day	15	0	0
	Expenditure Approach	45	0	0
	2 PPP$/day	62	0	0
non-farm unskilled	1 PPP$/day	2	0	0
	Expenditure Approach	13	33	67
	2 PPP$/day	19	33	67

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Hired labour generation (in FTE/10,000 roses)

	Me Linh (Hired labour in FTE/10,000)							**Sapa** (Hired labour in FTE/10,000)						
Chain	*1A*	*1B*	*1C*	*2A*	*2B*	*2C*	*3*	*4A*	*4B*	*4C*	*5A*	*5B*	*5C*	*6*
Worker														0.49
Producer	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.23	0.23	0.23	0.17	0.17	0.17	0.02
Wholesaler	0.00	0.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00
Flower shop	0.22			0.11				0.22			0.22			0.22
Flower stall		0.00			0.00				0.00			0.00		
Hawker			0.00			0.00				0.00			0.00	
Total hired FTE	0.24	0.01	0.01	0.12	0.00	0.00	0.00	0.46	0.24	0.24	0.40	0.18	0.18	0.73
Total FTE	1.21	0.57	0.47	0.65	0.57	0.56	0.51	1.22	0.58	0.48	1.78	1.14	1.04	1.41
% Hired FTE of FTE	19%	2%	2%	18%	1%	1%	0%	38%	41%	49%	22%	15%	17%	52%

- Per 10,000 roses most hired labour is involved in Chain 6.
- In chain 6: 90% of workers are women, 20% are ethnic minorities
- Large farms in Sapa generate second highest hired labour FTE
- Flower shops in urban areas generate 0.22 FTE of employment per 10,000 roses

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Conclusions

- Rose sector lifted farmers in Me Linh out of poverty
  - Rose cultivation kept at least 30 % of farmers above poverty line
- Large potential for Pro Poor flower development in the Northern mountains
  - Effect through rose workers
  - Plans for out growers scheme among ethnic minorities
- Which type of chain to stimulate depends on multiplier effects:
  - What will wholesalers do with their profits?
  - Will they invest in quality improvement and post harvest?
- Company chain (no. 6) generates most net value and provides employment in mountainous rural areas
- Workers in company have higher net value/FTE than farmers in Me Linh and comparable with farmers in Sapa
- Flower shops add highest value (+ US$ 406/10,000 roses) and generate employment for 0.22 FTE per 10,000 roses in urban areas

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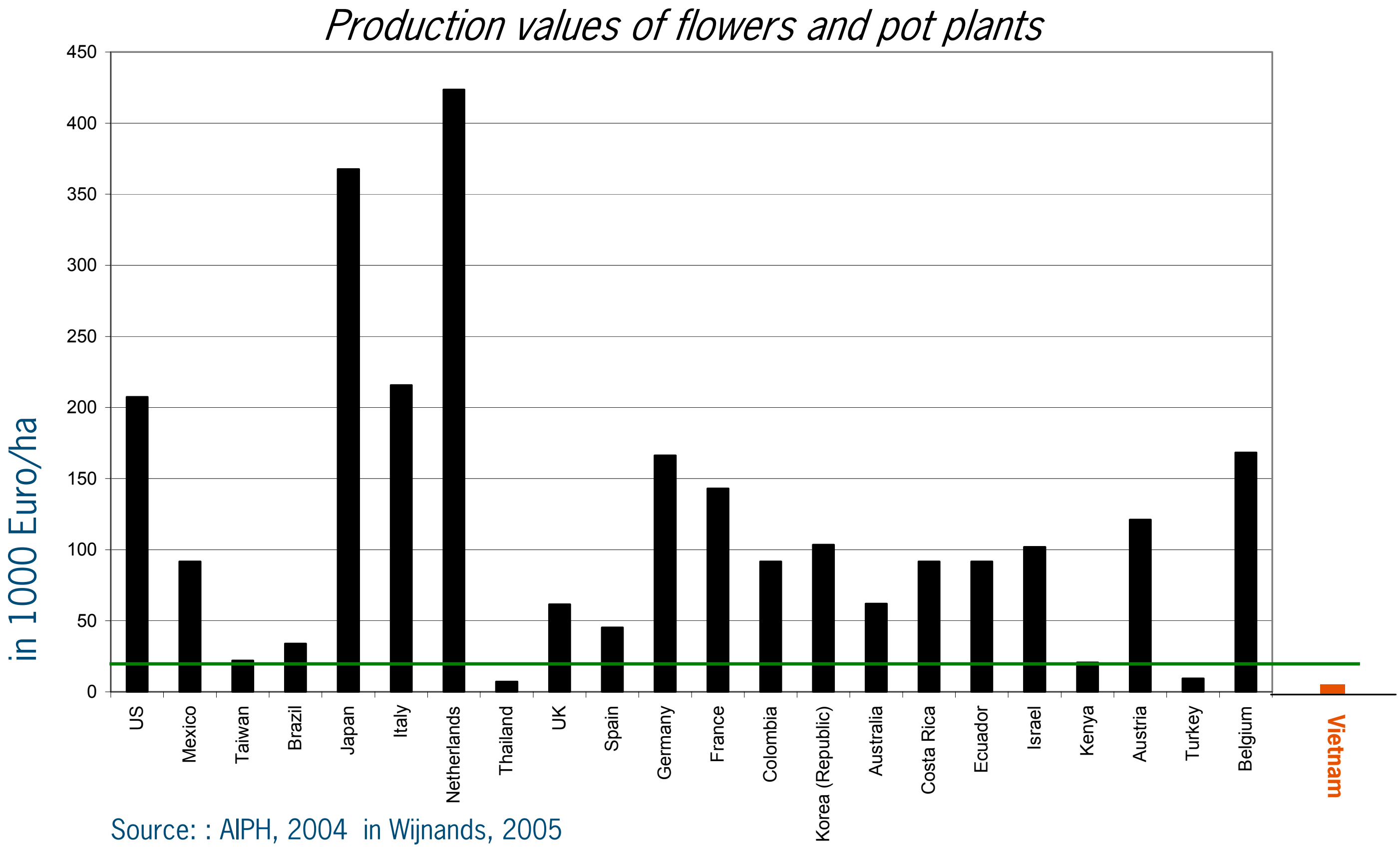
Recommendations

- How does economic development impact of flower sector compare with other sectors?
  - Carry out similar kind of bench mark studies
- Till now in Vietnam limited applied research and extension on flowers
  - High use of agro-chemicals, big problem, especially in fragile mountainous areas
  - Invest in applied flower research
  - Bring in Foreign direct investment in flower sector
    - Plant Variety Protection will be important issue
- Cost price for Vietnamese roses very competitive for export but:
  - Focus on quality (vase life)
  - Investigate possibilities to involve wholesalers in development of export chain

Enough possibilities for improvements……



Source: : AIPH, 2004 in Wijnands, 2005

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Thank you for your attention

For more information:

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Discussion points for afternoon

- What are main obstacles for rose sector development?
- What can be done to overcome them?
- What are major obstacles for the poor to participate in rose value chains?
- How can they be overcome?
- What would be best?
  - Stimulate smallholder flower production or;
  - Stimulate large flower companies (incl. FDI)

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